

MARKED-UP VERSION OF THE AMENDE CLAIMS:

1. (three times amended) An internal high-pressure deformation method comprising furnishing a first [work piece] workpiece part with a first flange having a first sealing face;

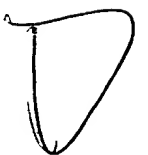
furnishing a second [work piece] workpiece part with a second flange having a second sealing face, wherein the first sealing face [is matching] matches the second sealing face to deliver a sealing connection between the first flange and the second flange;

disposing the first workpiece part and the second workpiece part such that the first sealing face is disposed opposite to the second sealing face;

surrounding the first workpiece and the second workpiece by first tool region, a second tool region and a third tool region [subdivided into a first segment and a second segment] forming a mold, wherein the third tool region is subdivided into a first segment and a second segment;

pressing the first sealing face against the second sealing face such that the connection between the first flange and the second flange is [sealing] sealed relative to a fluid pressurizing agent;

feeding pressurizing [agent] fluid into [a volume] an area delimited by the first workpiece and by the second workpiece;



deforming the first workpiece and the second workpiece jointly by internal high-pressure [deformation] against the first tool region, the second tool region and the third tool region [and effected by the pressurizing agent]; moving the first tool region away from the deformed first workpiece and the deformed second workpiece;

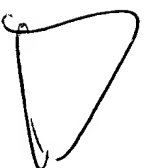
moving the first segment away from the deformed first workpiece, the deformed second workpiece and the second segment in a direction different from the direction of pressing of the first sealing face against the second sealing face to allow removal of the deformed first workpiece and of the deformed second workpiece from the mold [for production of a bulging out and undercut hollow body].

2. (twice amended) The internal high-pressure deformation method according to claim 1 further comprising

inserting a third workpiece part adjoining the first flange region into the deformation tool; and

pressing the first flange against the third flange in a pressurizing [agent] fluid sealing way;

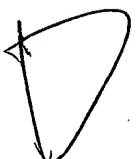
deforming the third [work piece] workpiece part together with the first [work piece] workpiece part and the second [work piece] workpiece part.



3. (twice amended) The internal high-pressure deformation method according to claim 1 further comprising allowing a relative motion toward each other of the first [work piece] workpiece part and of the second [work piece] workpiece part during the pressurizing [agent] fluid sealingly pressing in the region of the first flange and of the second flange.

4. (twice amended) The internal high-pressure deformation method according to claim 1 further comprising performing a stamping in the region of the first flange and of the second flange during the pressurizing [agent] fluid sealingly pressing together of the workpiece parts for influencing a flow of the material and/or for supporting a sealing and/or for accomplishing a positional fixation between the individual workpiece parts.

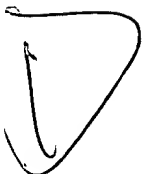
6. (twice amended) The internal high-pressure deformation method according to claim 1 further comprising feeding pressurizing [agent] fluid through a docking connection between a pressure feed and an opening in the second workpiece part.



11. (twice amended) An internal high-pressure deformation method for the production of undercut hollow bodies by employing at least two workpiece parts (1,2), which two workpiece parts (1,2) are pressed by pressurizing [agent] fluid sealingly in the region of a flange (1. 1,1.2) and which two workpiece parts (1,2) are deformed jointly [by the internal high-pressure deformation], wherein the deforming is performed against an engraving surface, wherein the parts of the engraving surface are movable away from each other in a direction of intersecting axes.

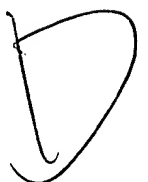
12. (twice amended) The internal high-pressure deformation method according to claim 11 wherein more than two workpiece parts (1,2) adjoining each other in the flange region are inserted into the deformation tool and are pressed against each other with pressurizing [agent] fluid sealingly in the flange region and are deformed.

13. (twice amended) The internal high-pressure deformation method according to claim 11 wherein the work piece parts (1,2) allow a relative motion toward each other during the pressurizing [agent] fluid sealingly pressing in the flange region (1.1, 2.1).



14. (twice amended) The internal high-pressure deformation method according to claim 11 wherein a stamping is performed in the region of the flanges (1.1, 2.1) during the pressurizing [agent] fluid sealingly pressing together of the [work tool pieces] workpiece parts (1,2) in order to influence the flow of the material and/or to support the sealing and/or to accomplish a positional fixation between the individual workpiece parts (1,2).

15. (three times amended) An apparatus for production of undercut hollow bodies, wherein the apparatus is subdivided into an upper tool region [(e1)] (E1), a middle tool region (E2), and a lower tool region (E3) corresponding to a workpiece form to be generated and the number of workpiece parts (1, 2), wherein the upper tool is disposed in an upper plane, wherein the middle tool region is disposed in a middle plane, and wherein the lower tool region is disposed in a lower plane, wherein the middle tool region is subdivided [in two segments (S1, S3)] into a first segment (S1) and a second segment (S3) according to the shape of the workpiece, wherein the workpiece is pressed by internal high pressure deformation using a liquid pressure medium, and wherein the [segments (S1,S3)] first segment (S1) and the second segment (S3) are movable away from the

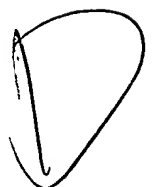


hollow body (W) for removal of the hollow body (W) from the mold and
further comprising

means for moving the first segment from the second workpiece part in a
direction disposed at an angle relative to a pressing direction performed by
the first tool region and by the second tool region;

means for moving the second segment from the second workpiece part in a
direction different from a pressing direction of the first tool region or of the
second tool region and away from the first segment.

18. (amended) An apparatus for production of bulged out and undercut hollow bodies comprising
a first tool region;
a second tool region;
a third tool region, wherein the third tool region is subdivided into a first segment and a second segment,
wherein the first tool region corresponds to a first workpiece part,
and wherein the second tool region and the first segment and the second segment correspond to a second workpiece part, wherein the tool regions are disposed on [to] top of each other;



means for moving the first tool region in a direction away from the location of the second tool region;

means for moving the first segment from the second workpiece part in a direction disposed at an angle relative to a pressing direction performed by the first tool region and by the second tool region;

means for moving the second segment from the second workpiece part in a direction different from a pressing direction of the first tool region or of the second tool region and away from the first segment.

20. (amended) A die for production of bulged out and undercut hollow bodies comprising

an upper tool region having a molding surface at its bottom side;

a middle tool region comprising a right segment having a molding surface on a left hand side and a left segment having a molding surface on a right hand side; a lower tool region having a molding surface at its top side,

wherein the molding surface at the bottom side, the molding surface at the right hand side, the molding surface at the left hand side and the molding surface at the top side correspond to a workpiece form to be generated and

wherein the right segment [can be removed] is removable toward the right



side and wherein the left segment [can be removed] is removable toward the left hand side for allowing removal of a hollow workpiece.



REMARKS

Claims 1 through 20 continue to be in the case.

Claims 1, 2, 3, 4, 6, 11, 12, 13, 14, 15, 18 and 20 are being amended.

Claim 15 is amended based on language found at the end of claim 18.

1. Claims 1-20 stand rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims as a whole remain indefinite and unclear in nature. They appear to be a product of translation from a foreign document. Claim 1 will be reviewed for the record. All the claims should be reviewed for like problems and amended into proper claim format. In claim 1, lines 3 and 5, "workpiece" should be changed to - - workpiece - - to be commensurate with US spelling. On line 6 of claim 1, "is matching" should be changed to - - matches - - to be grammatically correct. On lines 12 and 13, the limitation, "a first tool region, a second tool region and a third tool region subdivided into a first segment and a second segment forming a mold" is vague and indefinite. It is not clear whether the first and second segment make up the third tool region or all three regions. By disclosure it would appear that the third tool region is comprised of two segments. On line 15 of claim 1, "is sealing" should be changed to - - is sealed - - to be grammatically correct. On line 17 of claim 1, "agent" is indefinite if not non-idiomatic in nature; "fluid" is a more accurate term. Further on line 17, "volume" is a non-idiomatic term and - - area - - is a more accurate term. On line 19/20 of claim 1, "by internal high-pressure deformation" is awkward if not indefinite; the deformation is

produced by - - internal high-pressure - - alone. On lines 21 and 22 of claim 1, the limitation "effected by the pressurizing agent" is indefinite and unclear. Finally on the last two lines, "for production of a bulging out and undercut hollow body" is an awkward and indefinite limitation. All the claims contain indefinite limitations as recited in claim 1 and should be reviewed and amended into proper claim form.

Applicant is amending claim 1 as kindly suggested by the Examiner. The remaining claims are being amended to correct vagueness and indefiniteness.

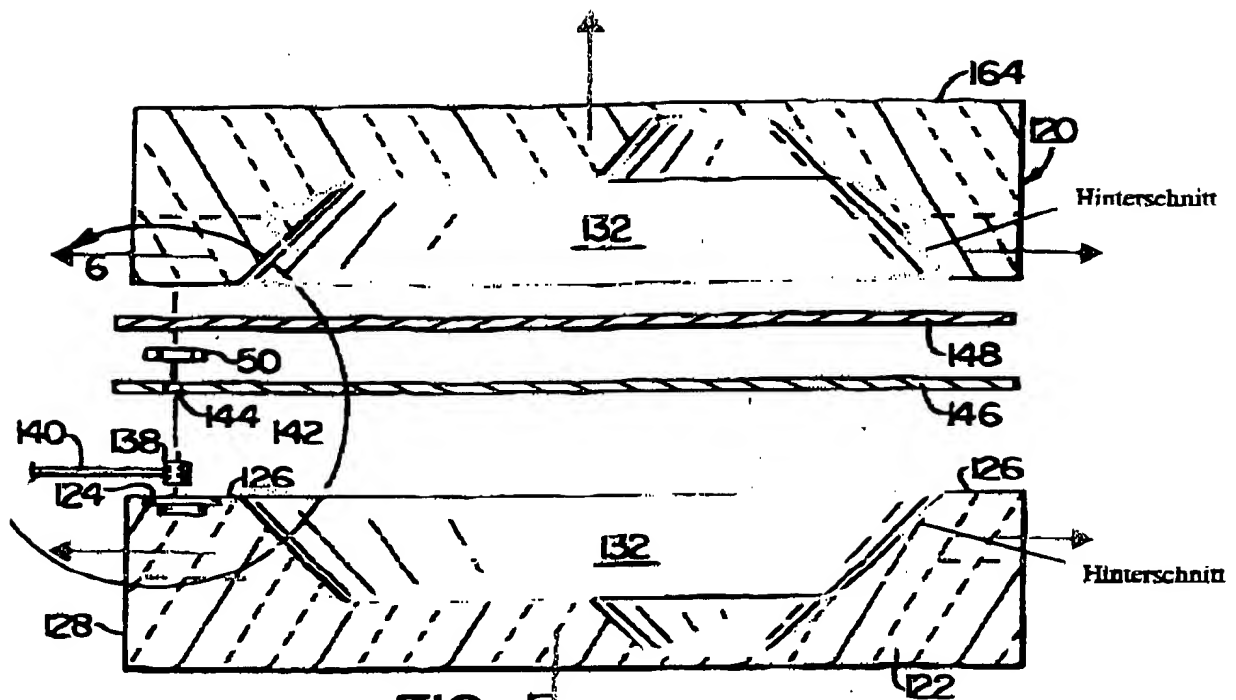
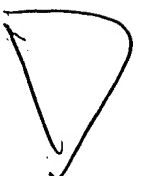
2. Claims 15-17 stand rejected under 35 U.S.C. 102(b) as being anticipated by Yasui.

The present amendment amends claim 15 by incorporating language from claim 18, which language is believed to define over the Yasui reference.

Furthermore, Yasui teaches a simultaneous superplastic deformation of two pieces of sheet metal by employing a gas. The outer diameter of the sheet metal uniformly narrows in a direction to a floor and therefore no bulged hollow body is present in the Yasui reference. An additional decrease in diameter or an additional increase in diameter under formation of a back cut in the all of the respective sheet metal piece, since the sheet metal piece then cannot be removed from the tool.

Fig. 5 of the reference Yasui is shown in the following:



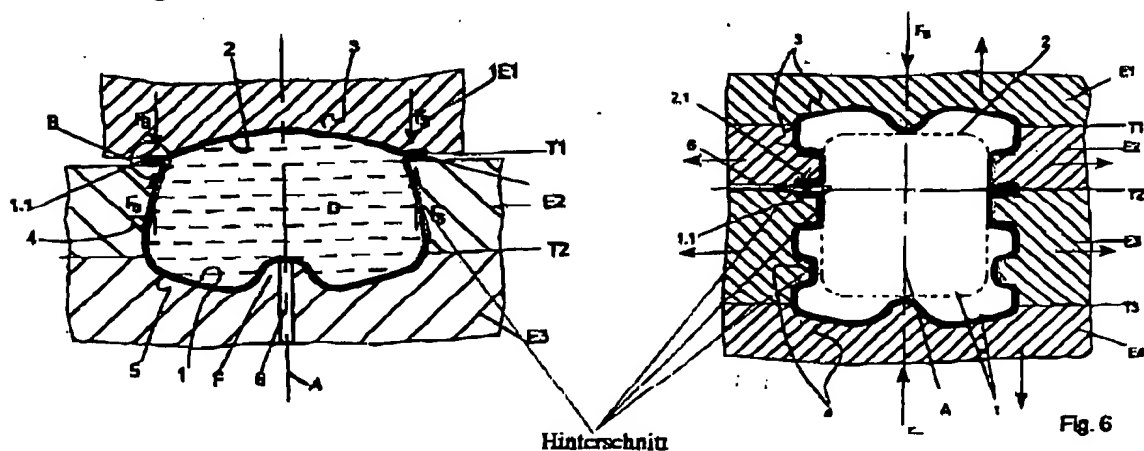
**FIG. 5**

If the sheet metal in the shape shown in red would be deformed, then they could based on the back cut not be removed from the form, since the upper half workpiece and the lower half workpiece comprise each a single part. Only a subdivision of the tool along the separating plane marked in blue and a subdivision in several segments would here enable a removal of the workpiece, in case the individual tool parts are removable from the from the workpiece in the kind illustrated with blue arrows.

Therefore, the Yasui method does not allow a production of hollow bodies having a back cut from a sheet metal piece with internal high pressure deformation while using a liquid pressure medium.

In contrast, the present invention is furnished for a production of hollow bodies having a back cut from a sheet metal piece with internal high pressure deformation while using a liquid pressure medium.

A back cut according to the present invention is shown in the following:



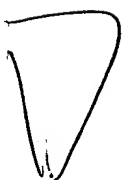
The hollow parts having a back cut can only be produced, since the mold is subdivided by separating planes and since the formed segments can be removed from the workpiece as set forth in claim 15. It is urged that therefore claim 15 as amended clearly defines the present invention. In contrast to Yasui, only the features of the apparatus recited in claim 15 allow to produce this kind of hollow body having a back cut.

The present amendment is intended to present claims which are deemed to be in better form for appeal.

The present amendment is deemed to remove and/or simplify issues which would otherwise require consideration in an appeal.

The present amendment is believed not to present any new issues since the claims are substantially based on previously presented claims and since such limitations had been individually submitted earlier and had been considered earlier.

It is submitted that the amendment is a bona fide attempt to advance the prosecution by amendments to the claims seeking to overcome rejections based on the applied prior art and/or rejections under 35 U.S.C. 112.



It is submitted that the present amendment complies with observations made in the Final Rejection.

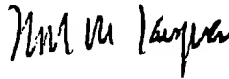
Reconsideration of all outstanding rejections is respectfully requested.

Entry of the present amendment is respectfully requested. All claims as presently submitted are deemed to be in form for allowance and an early notice of allowance is earnestly solicited.

Respectfully submitted,

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